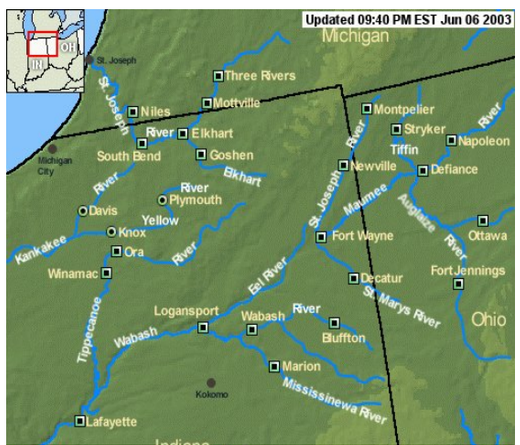
Hydrology

WFO Northern Indiana is responsible for flood forecasts along rivers in 4 major basins covering Northern Indiana, Northwest Ohio and Extreme Southern Michigan. These River Basins are the Kankakee, St. Joseph, Maumee and Upper Wabash. River forecasts are issued for 27 locations along 16 rivers in these basins.

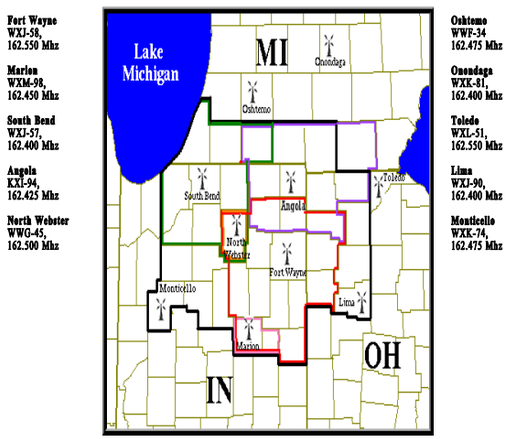
Flood Warnings are issued for flooding which is a threat to life and property. Doppler radar rainfall estimates along with rain gauges and satellite rainfall estimates are used to track heavy rain producing storms across the Lower Great Lakes region.

The Advanced Hydrologic Prediction Service (AHPS) is being implemented across the country. AHPS makes it possible to make flood and water supply predictions for rivers and streams out to 90 days in advance.



NWS KIWX Hydrologic Service Area

NOAA Weather Radio is your direct link to the NWS, broadcasting 24 hours a day. NOAA Weather Radio is the fastest method of receiving Severe Weather Warnings, Watches and critical information from local emergency management officials. Specially equipped radios will turn on automatically when an alert is issued.



NWS KIWX Radio Coverage Area

The Northern Indiana office is responsible for programming five radio transmitters, located in South Bend, Fort Wayne, Marion, Angola, and North Webster. Neighboring NWS offices also program transmitters that reach part of our county warning area. These transmitters are located in Yeoman (Monticello) IN, Cridersville (Lima) OH, Toledo OH, Onondaga MI, and Oshtemo MI.

Our Office

The National Weather Service in northern Indiana serves the citizens of northern Indiana, southern lower Michigan and northwest Ohio every day of the year, 24 hours a day. Our area of responsibility encompasses 37 counties across the three state region.

23 The NWS Northern Indiana office has full-time employees:

- **1** Meteorologist-in-Charge
- **13** Meteorologists, including a Science and Operations Officer, a Warning Coordination Meteorologist, and 2 Interns
- **1** Service Hydrologist
- **1** Data Acquisition Program Manager
- **2** Hydrometeorological Technicians
- **4** people in electronics and computers
- **1** Administrative Support Assistant

The National Weather Service is a division of the National Oceanic and Atmospheric Administration (NOAA), within the United States Department of Commerce (DOC).

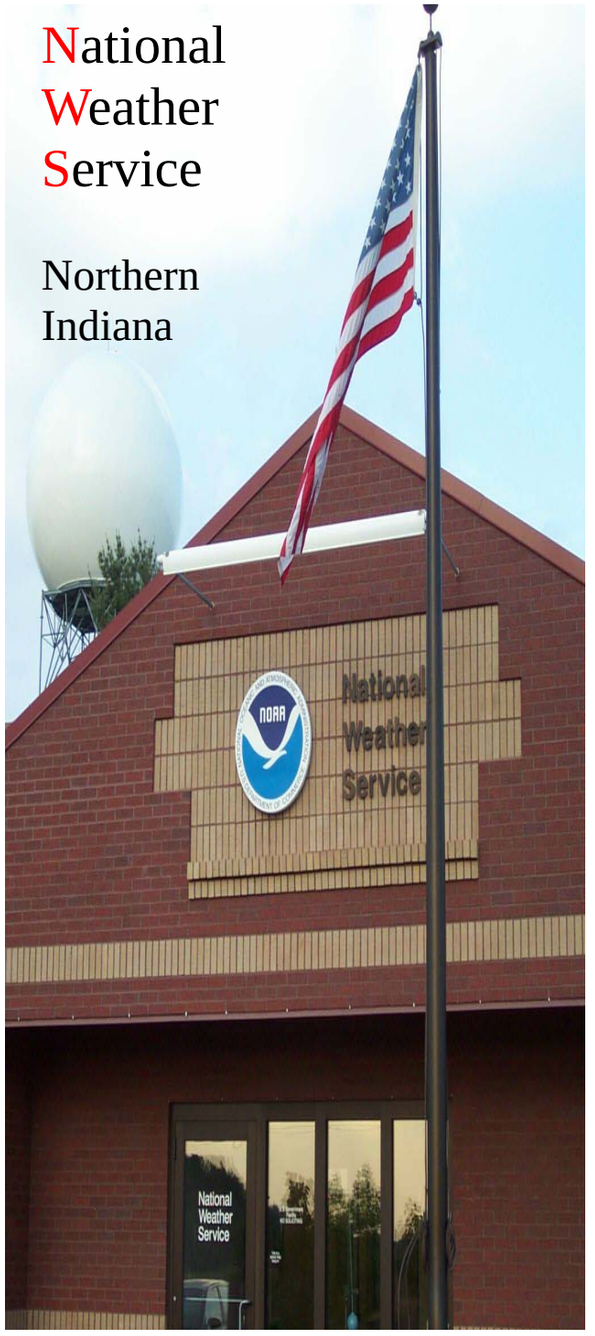
For additional information contact:

National Weather Service
Northern Indiana Office
7506 E. 850 N.
Syracuse, IN 46567

(574) 834-1104

National Weather Service

Northern Indiana



http://www.crh.noaa.gov/iwx

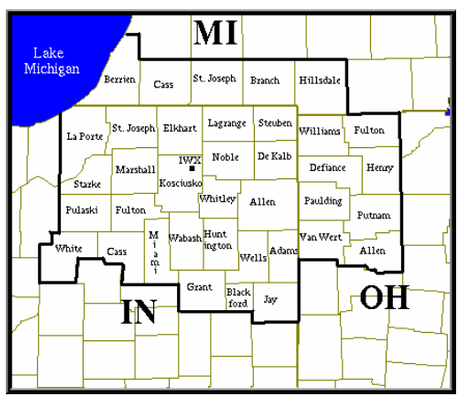
Mission

The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community

Locally

The National Weather Service office in Northern Indiana (KIWX) issues thousands of products each year, including warnings, advisories, watches, public and aviation forecasts, river forecasts, climate summaries and many, many more.

This office is responsible for weather covering 37 counties across northern Indiana, lower Michigan, and northwest Ohio.



NWS KIWX County Warning Area

Spotters/Observers

Many people around the country volunteer their time to help the NWS fulfill its mission. Citizens trained to observe and report severe weather are known as Skywarn Spotters. These people become certified observers by regularly attending training classes on how to safely and correctly observe weather phenomena. Their reports to the NWS help save lives and protect property.

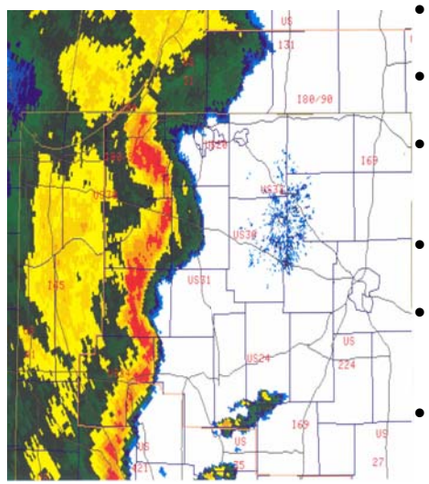
Volunteers also record daily temperature and precipitation data, as well as river level information. The National Weather Service in Northern Indiana has 88 cooperative observers who provide this timely data to help in the forecast and warning process.

Automated Surface Observing Systems (ASOS/AWOS) are used at airports to collect data continuously. Weather elements such as wind, visibility, cloud height, temperature, dew point and pressure are coded into observations and transmitted to the world wide weather community.

The National Weather Service wants you to be aware of severe weather well ahead of its arrival, giving you plenty of time to prepare and take action to protect yourself. Outlooks are issued several days ahead of a potential storm, while specific warnings are issued several minutes before severe weather strikes. Here are some important products you should look for:

- **Hazardous Weather Outlooks** – Issued daily around 5:00 am EST. A “heads up” product, alerting you to potential weather threats as much as 7 days in advance.
- **Tornado/Severe Thunderstorm Watches** - Issued when 3/4 inch diameter or larger hail and/or thunderstorm winds in excess of 58 mph are expected within several hours. A Tornado Watch includes the large hail and damaging wind threats, as well as the possibility of multiple tornadoes.
- **Tornado/Severe Thunderstorm Warnings** - Severe weather is imminent or already occurring in the warning area. Seek safe shelter immediately in the lowest, most inner portion of your building, preferably in the basement and away from windows.
- **Severe Weather Statements** - Provide updated information on warnings that are in effect. Includes storm location and movement, as well as cities in the path. May also be used to relay damage reports and cancel warnings.

The **WSR-88D Doppler Radar** is one of the most powerful weather radars in the world. Its purpose is for monitoring the location, movement and intensity of precipitation, allowing meteorologists to determine whether severe weather warnings are needed. The KIWX 88D provides data out to nearly 300 miles from the office. In addition, six nearby radars from adjacent weather forecast offices provide supplemental coverage with near real time data available to NWS staff.



- The radar transmits at a peak power of 750,000 watts from a 28 foot diameter antenna on top of a 100 foot tower.
- Has its own diesel generator as a backup power source during commercial power outages.
- Three basic atmospheric measurements of reflectivity, velocity and spectrum width are obtained and used to produce over 100 individual products.
- Produces estimated rainfall amounts used in issuing Flash Flood Warnings.
- Three different strategies of scanning the atmosphere are used to get a "full" picture of storm structure. The more active the weather, the more scans available.
- Detects air motion even when no precipitation is occurring. Clouds, bugs and birds may also be detected at times.